

# **Susquehanna Valley Section American Chemical Society**

## **Annual Education Awards Banquet**



**Links Restaurant  
Bloomsburg, Pennsylvania**

May 7, 2014

5:30 p.m.

# PROGRAM

- I. Welcome and Introductions .....***Dr. Geneive Henry*
- II. 50-Year ACS Member .....***Dr. Geneive Henry*  
DR. ROY D. POINTER Bloomsburg University, retired
- III. Joseph Priestley Service Award.....***Dr. Geneive Henry*  
DR. MARGARET E. KASTNER Bucknell University, retired
- IV. High School Teacher Award.....***Mr. Ronald Blatchley*  
DR. JOCELYN HOLODICK-REED Hanover Area Junior/Senior HS
- V. David H. Frederick Memorial Awards in High School Chemistry.....** *Dr. Charles Mahler*

## EXAM A WINNERS

TYLER STOLTZFUS	Mifflinburg Area High School Teacher – Mr. Brian Landis
TATIANA CHICHILLA	St. John Neumann Regional Academy Teacher – Ms. Sara Baszczewski
BENJAMIN SULLIVAN	Scranton Preparatory School Teacher – Ms. Jane Nagurney
ANDREW BOCHNOVICH	Honesdale High School Teacher – Ms. Michelle Tonkin
MATT KARNISH	Marian Catholic High School Teacher – Mr. Robert Valente
JAY SOLGAMA	MMI Preparatory School Teacher – Ms. Laura Petro

## EXAM A RUNNERS-UP

ALLISON MIDDERNACHT	Lewisburg Area High School Teacher – Ms. Angela Gockley
OLIVIA HAUGER	Mifflinburg Area High School Teacher – Mr. Brian Landis
MADALYN CHARNEGO	Jersey Shore Area High School Teacher – Mr. Alex Hunter
ANTHONY LORSON	Williamsport Area High School Teacher – Ms. Dale Seeley
KATIE BOUND	Old Forge High School Teacher – Ms. Adrianna Rupprecht
NOAH SHANDOR	Western Wayne High School Teacher – Ms. Maria Masankay
MICHAEL BONIFONTE	Hanover Area Jr/Sr High School Teacher – Dr. Jocelyn Holodick-Reed

## EXAM B WINNER

TRISTAN BEITER Danville Area High School  
Teacher – Ms. Deborah Slattery

## EXAM B RUNNER-UP

WADE HEIDEL

Milton Area High School  
Teacher – Ms. A. Faye Hinson

**VI. Chemistry Olympiad Competitors ..... *Dr. Deanne Garver***

ELIJAH WILLIAMS

Crestwood High School

REBECCA NETELER

Teacher – Ms. Desiree Hoyt

MAX GOODWIN

Crestwood High School

ALISON MARTIN

Teacher – Ms. Desiree Hoyt

PETER KULICK

Honesdale High School

NICHOLAS LOMMA

Teacher – Ms. Michelle Tonkin

Honesdale High School

Teacher – Ms. Michelle Tonkin

Scranton Preparatory School

Teacher – Ms. Jane Nagurney

Scranton Preparatory School

Teacher – Ms. Jane Nagurney

**VII. College Award Winners ..... *Dr. Ernie Trujillo***

KRISTIE DARRAH

Bloomsburg University

CLAIRE OUIMET

Bucknell University

SARA POTTEIGER

King's College

TIM KOCHER

Lycoming College

CASSANDRA SCHWARTZ

Marywood University

AMELIA POPLAWSKI

Misericordia University

SCOTT HOLDREN

University of Scranton

HUNTER HOFFMAN

Susquehanna University

PHILLIP ESEMPIO

Wilkes University

## VIII. "Protein Cross-Linking via Excitation of Aromatic Photo-activators: Techniques, Challenges and Advances"

Dr. Swarna Basu, *Susquehanna University*

Free-form fabrication, also known as cross-linking or photo-polymerization, of proteins (bovine and human serum albumins, fibrinogen and lysozyme) has been carried out by the direct excitation of various photoactivators (ex. Rose Bengal, Methylene Blue and 9-fluorenone-2-carboxylic acid) using a pulsed Nd<sup>3+</sup>-YAG laser. These crosslinked structures can serve as models for various applications including drug delivery and tissue engineering. Optimal laser exposure dose for cross-linking and the nature of the interaction between photoactivator and protein have been determined. The cross-linking efficiency of proteins that have been involved in other processes is drastically reduced as the tryptophans that are typically involved in cross-linking have limited accessibility. Finally, fluorescence detection capabilities have been incorporated into the microscope for determining bioactivity retention and measuring fluorescence recovery within these structures following photobleaching.

Dr. Swarna Basu is an Associate Professor of Chemistry at Susquehanna University. He conducts research in the areas of photochemistry, fluorescence microscopy, computational chemistry and biomolecular interactions. His current projects include protein cross-linking, detection of quadruplex DNA using metal complexes and nanoparticles, and the interaction of proteins with metal complexes. He received his B.A. from Clark University and his PhD from Wesleyan University, where he studied inter- and intramolecular interactions and conformational dynamics in aromatic systems using pump-probe laser techniques and computational methods. After graduation, he was a postdoctoral fellow at The University of Connecticut Health Center, where he carried out protein cross-linking via multiphoton excitation of photoactivators, studied bioactivity retention using fluorescence imaging, and developed models for controlled-release and tissue engineering applications.

### 2014 ACS SUSQUEHANNA VALLEY SECTION OFFICERS

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The American Chemical Society is a nonprofit scientific and educational association of professional chemists and chemical engineers. Although the Society is primarily an American organization, virtually every nation is represented among its over 160,000 members.

The programs of the Society include meetings, publications, education, awards, and public service activities, including National Chemistry Week. 1,500 ACS meetings are held each year at the local, regional, national, and divisional levels. Over twenty ACS journals are the leading resources in the chemical field. Educational activities include services to high school and college chemistry students and continuing education programs for its members. The Society presents numerous awards for outstanding achievement in various fields of chemistry through national, regional, divisional, and local channels. Fellowships and research grants for basic research are administered by the society.

The Susquehanna Valley Section of the ACS includes members from eight counties in central to northeastern Pennsylvania.